

**To:** Brinkhuis, Randall[Brinkhuis.Randall@epa.gov]; COHEN, Deborra[Cohen.Deborra@epa.gov]; Morin, Jeff[Morin.Jeff@epa.gov]; Hart, Daniel[Hart.Daniel@epa.gov]  
**From:** Dibble, Christine  
**Sent:** Thur 8/13/2015 9:09:56 PM  
**Subject:** Re: Clarification needed pH on "Roles of EPA" page

Jeff and Danny, could you please help with this one? Thanks.

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**From:** Brinkhuis, Randall  
**Sent:** Thursday, August 13, 2015 4:46 PM  
**To:** COHEN, Deborra; Dibble, Christine  
**Subject:** Clarification needed pH on "Roles of EPA" page

Deborra and Christine,

Wasn't sure who to contact about this (and I didn't want to submit the web form), but there's a statement on the Roles of EPA page that should be rephrased just a bit.

The sentence in bold below could be interpreted as meaning that EPA is increasing the acidity of the water when in fact the opposite is true. pH is a measure of whether you have an acid or a base. By adding alkali to the water we're making it less acidic and more basic. Maybe something like "We are raising the pH of the water (and reducing the acidity)...."

(But please check with a chemist as to how the sentence should be rewritten.)

<http://www2.epa.gov/goldkingmine/roles-epa-and-other-responders-after-2015-gold-king-mine-release>

## Mine Discharge Treatment

We are treating the mine water in a series of settling ponds constructed near the portal. The treatment appears to be effective. **We are raising the pH (acidity) of the water with the addition of lime and sodium hydroxide solution** to facilitate sedimentation of the metals in the ponds. We are adding flocculant agents (used in water treatment processes to improve the sedimentation or filterability of small particles) to increase the amount of sedimentation. The treated water that is being discharged to Cement Creek has a pH of 5.5.

Also, it might be helpful to indicate what the pH of the untreated water is (or was).

Randy

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